Integrated Physician Workstation for Use in a Family Practice Teaching Clinic

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The Department of Family Practice at the University of Texas Health Science Center at San Antonio utilizes physician workstations in its teaching clinics that combine computer-assisted instruction, clinical patient information, and a myriad of clinical tools into one integrated information resource. Both commercial products and department-designed information tools are integrated into a single, Windows-based physician workstation. From a single workstation, clinicians can take computerized tests, look up ICD-9 codes, review a wide range of patient data, look up drug information, activate protocol systems, view the full text of medical journals, access the medline, and communicate via the internet.

Student testing consists of a series of online multiple-choice exams that both evaluate and educate third-year clerkship students as they rotate through our clinics. The exams cover 24 of the most common problems seen in primary care. Each exam consists of ten questions randomly picked by the computer from a battery of test questions developed for each topic area. After each exam, the students are shown their grades. They are then given the opportunity to review the questions again with the correct answers identified. A short explanation of each answer is provided. Students may repeat the tests as many times as required until a passing grade is obtained in each topic area.

Workstation connection to the teaching hospital's Novell network allows access to a wide range of clinical information on our patients. Laboratory data, radiology reports, discharge summaries, specialty consultation results, cardiac catheterization reports, and outpatient medication summaries are available on the patients seen in our clinics.

Diagnostic coding is performed via access to Code-Link(r), a commercial program that contains all known ICD-9 codes. For simpler searches, the workstation incorporates a database engine that searches for the 1500 most common codes used in our clinic.

The workstation incorporates Electronic Drug Reference(r) by Clinical Reference Systems to serve as an online source of drug information. Information about drug indications, contraindications, doses, interactions, and dosage forms is readily available. In addition, the program prints out a patient information sheet for each drug.

The workstation incorporates a series of protocol systems developed within our department that provide clinicians with a wide range of decision-support services. Among these protocol systems, PEDIATRICIAN is a program that generates a series of recommendations for well-children care based upon the child's age. Included is a listing of the history, physical, lab, immunizations, anticipatory guidance, development, vitamins, and follow-up for each standard screening age. Another protocol system, OBSTETRICIAN, generates a series of recommendations for each week of prenatal care.

On-line text retrieval is achieved by use of DiskPassage(r) to access a series of CD-ROM resources. At present, the CD-ROM library includes information stored from selected issues of Pediatrics, Pediatrics Infectious Disease Journal, Pediatrics in Review, The "Red Book" on pediatric infectious diseases, New England Journal of Medicine, and American Family Physician.

Modem communication with our health sciences library is achieved via TermPlus(r), a Windows-based communication program. From the library, clinicians can access medline information via the CD-ROM-based Plusnet(r) system. Communication with the library also allows access to campus mail, to our campus-wide information system, and to the burgeoning resources of the internet.

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